

While the major life zones of California were defined in a general way some years ago by Dr. Merriam, and also by Mr. Keeler, and some of the minor areas by Dr. Grinnell in 1902,¹ this appears to be the first attempt to delimit and name the Faunas of the State, as such, the faunal areas, or "Isohumic Areas," of Grinnell, ten in number, being climatic rather than faunal. Mr. Stephens's extended field experience in California has made him familiar with the faunal as well as the climatic conditions prevailing over a large part of the State, so that his paper on its faunal areas is based largely on personal knowledge. It is to be regretted, however, that he did not give more space to details in defining his faunal areas, and also that they were not more formally set off typographically in the text.—J. A. A.

Chapman on the Life History of the American Flamingo.²—In this paper of twenty-five pages, with numerous half-tone illustrations from photographs of the living birds, Mr. Chapman has presented the scientific results of his studies of the great Bahama Flamingo rookeries in May, 1902, and May and June, 1904. An earlier popular account of the same observations was given by him in 'The Century Magazine' for December, 1904, and also some notes on the habits of the young birds in 'Bird-Lore' (Vol. VI, pp. 193-198). Also in 'The Auk' for January, 1905 (XXII, pp. 107-109), in our account of the 'Flamingo Group' recently placed on exhibition in the American Museum of Natural History, some reference is made to his successful trip to the Bahamas for Flamingoes in 1904. The present paper gives a systematic and very full account of the life-history of the species as observed under the most favorable conditions. He remained at the rookery from June 7 to June 14, studying the birds at close-range during the height of the breeding season. By erecting skilfully devised 'blinds' he was able to established himself in the very midst of the great rookery, "without apparently arousing the birds' suspicions," from which the colony could be observed and photographed as a whole, or the individual birds, young and old, "studied from as near as six feet."

After a brief summary of the work of previous observers, he proceeds to give a detailed account of the habits of the birds, including the time of nesting, the character of the nesting ground, the nest and its construction, the eggs, the period of incubation, the habits of the young birds and of the adults, including their notes and food; while the reproduced photographs show the rookery when the birds are in repose (incubating and

¹ Check-List of California Birds. Pacific Coast Avifauna No. 3, June, 1902, pp. 6, 7, and 2 maps.

² A Contribution to the Life History of the American Flamingo (*Phoenicopterus ruber*), with Remarks upon Specimens. By Frank M. Chapman. Bull. Am. Mus. Nat. Hist., XXI, 1905, pp. 53-77, with 15 text figures. June 15, 1905.

sleeping), the nests with the single egg or young bird, the young in various stages of growth, the adults in various acts and attitudes, the old birds in the air leaving the rookery, a deserted rookery, etc. In addition to this the various plumages of the young are described, the adult plumage, the changes in the form of the bill with growth, with a table of comparative measurements of old and young birds, showing the great relative increase in the length of the tarsus in the old as compared with young birds. As a result we have laid before us in detail the life history of a species of which comparatively little was previously positively known.—J. A. A.

Oberholser on Birds Collected in the Kilimanjaro Region, East Africa.¹—This collection, made by Dr. W. L. Abbott during the years 1898 and 1899, comprises 256 species and subspecies, represented by 684 specimens. Most of the novelties had previously been described by Dr. C. W. Richmond in 1895, the new forms brought out in the present paper numbering three species and six subspecies. In the course of the paper, however, several new genera and ten new subgenera are proposed, since in working up Dr. Abbott's collection Mr. Oberholser has incidentally included considerable revisionary work on several groups of East African birds, and upon the nomenclature of other species.

The collection was found to include a number of rare species, besides extending, even at this late day, the known range of a number of others. "The best idea," says Mr. Oberholser, "of the marvelous richness of this collection of Dr. Abbott's is probably furnished by the subjoined list of 62 species and subspecies that were undescribed when obtained by him, an exposition that is possibly of more than passing interest as indicative of the great progress in African ornithology that the past eighteen years have witnessed."—J. A. A.

McGregor on Philippine Birds.—We are in receipt of two papers² by Mr. McGregor, giving a further account of his ornithological work in the Philippine Islands. The first relates to the islands Romblon, Sibuyan, and Cresta de Gallo, and is based on two months spent in their exploration in 1904 (May 25–July 21). Besides field notes on about 90 species,

¹ Birds collected by Dr. W. L. Abbott in the Kilimanjaro Region, East Africa. By Harry C. Oberholser, Assistant Ornithologist, Department of Agriculture. Proc. U. S. National Museum, Vol. XXVIII, pp. 823–936, 1905.

² I. Birds from the Islands of Romblon, Sibuyan, and Cresta de Gallo. II. Further notes on Birds from Ticao, Cuyo, Culion, Calayan, Lubang, and Luzon. By Richard C. McGregor. Publication No. 25, Bureau of Government Laboratories, Depart. of the Interior, Philippine Islands, Manila, May, 1905. 8vo, pp. 1–34, pll. i, *ibis*, ii–x.